AMENDMENTS TO THE CLAIMS:

Please amend claims 1, 4, , 65 and 69, and add claims 123 -127 as follows. Please cancel claims 6, 10, 54, 55, 83-86 and 117-122 without prejudice or disclaimer. This listing of claims replaces all prior versions, and listings of claims, in the application.

LISTING OF CLAIMS: Only SEQ ID Nos. 15, 16, 17

1. (Currently Amended) A substantially purified single or two chain MTSP7 polypeptide or a catalytically active portion of the polypeptide, wherein:

the polypeptide ~~is selected from the group consisting of:~~

~~a) a polypeptide that comprises a sequence of amino acids having at least about 90% amino acid sequence identity with the sequence of amino acids set forth in SEQ ID No. 16; and~~

~~b) a polypeptide that~~ comprises a sequence of amino acids encoded by the sequence of nucleotides set forth in SEQ ID No. 15. ~~; and~~

2. (Previously presented) The polypeptide of claim 1 that is an activated two chain polypeptide.

3. (Cancelled)

4. (Currently Amended) A substantially purified single or two chain polypeptide, comprising an MTSP7 protease domain ~~portion~~ or comprising a catalytically active fragment thereof, wherein:

said MTSP7 protease domain or catalytically active fragment thereof ~~portion~~ is the only MTSP7 portion of the single or two chain polypeptide; and ~~;~~

~~is a protease domain of MTSP7 selected from the group consisting of~~

~~a) a polypeptide consisting essentially~~

the protease domain of MTSP7 has only the sequence of amino acid residues ~~of the sequence of amino acids~~ encoded by the sequence of nucleotides set forth in SEQ ID No. 17~~;~~

~~b) a polypeptide consisting essentially of the sequence of amino acids has at least about 90% amino acid sequence identity with the sequence of amino acids set forth as SEQ ID No. 18; and~~

~~c) a polypeptide that is a catalytically active portion of a) or b);~~

~~and the MTSP7 portion of the polypeptide has serine protease activity~~.

5. (Original) The substantially purified polypeptide of claim 1, wherein the MTSP7 is a human polypeptide.

6. (Cancelled)

7. (Cancelled)

8. (Original) The substantially purified polypeptide of claim 1 that comprises the sequence of amino acids set forth in SEQ ID No. 16.

9. (Original) The substantially purified polypeptide of claim 1 that comprises the sequence of amino acids set forth in SEQ ID No. 18.

10. (Cancelled)

11.-17. (Cancelled)

18. (Currently Amended) ~~The polypeptide of claim 1~~ A substantially purified single or two chain MTSP7 polypeptide or a catalytically active portion of the polypeptide, wherein the polypeptide that comprises a sequence of amino acids encoded by the sequence of nucleotides set forth in SEQ ID No. 15, ~~wherein~~ except that a free Cysteine in the protease domain is replaced with another amino acid.

19. (Original) The polypeptide of claim 18, wherein the replacing amino acid is a serine.

20. – 49. (Cancelled)

50. (Original) A conjugate, comprising:

a polypeptide of claim 1, and

a targeting agent linked to the polypeptide directly or via a linker.

51. (Original) The conjugate of claim 50, wherein the targeting agent permits

affinity isolation or purification of the conjugate;

attachment of the conjugate to a surface;

detection of the conjugate; or

targeted delivery to a selected tissue or cell.

52. (Previously presented) A conjugate, comprising:

a polypeptide of claim 4; and

a targeting agent linked to the polypeptide directly or via a linker.

53. (Original) The conjugate of claim 52, wherein the targeting agent permits

affinity isolation or purification of the conjugate;

attachment of the conjugate to a surface;

detection of the conjugate; or

targeted delivery to a selected tissue or cell.

54. (Cancelled)

55. (Cancelled)

56. – 58. (Cancelled)

59. (Original) A solid support, comprising two or more polypeptides of claim 1 linked thereto either directly or via a linker.

60. (Original) The support of claim 59, wherein the polypeptides comprise an array.

61. (Original) The support of claim 59, wherein the polypeptides comprise a plurality of different protease domains.

62. – 64. (Cancelled)

65. (Currently Amended) A method for identifying compounds that ~~modulate~~ inhibit the protease activity of a polypeptide, comprising:

contacting a polypeptide of claim 1 with a substrate that is proteolytically cleaved by the polypeptide, and, either simultaneously, before or after, adding a test compound or plurality thereof;

measuring the amount of substrate cleaved in the presence of the test compound; and

selecting test compounds that change the amount of substrate cleaved compared to a control, whereby test compounds that ~~modulate~~ the activity of the polypeptide are ~~identified and the identified compounds~~ candidate anti-tumor agents ~~inhibit tumorigenesis~~.

66. (Original) The method of claim 65, wherein the test compounds are small molecules, peptides, peptidomimetics, natural products, antibodies or fragments thereof that modulate the activity of the polypeptide.

67. (Original) The method of claim 65, wherein a plurality of the test substances are screened simultaneously.

68. (Cancelled)

69. (Currently Amended) A method for identifying compounds that ~~modulate~~ inhibit the protease activity of a polypeptide, comprising:

contacting a polypeptide of claim 4 with a substrate that is proteolytically cleaved by the polypeptide, and, either simultaneously, before or after, adding a test compound or plurality thereof;

measuring the amount of substrate cleaved in the presence of the test compound; and

selecting test compounds that change the amount of substrate cleaved compared to a control, whereby test compounds that inhibit ~~modulate~~ the activity of the polypeptide are ~~identified and the identified compounds~~ candidate anti-tumor agents ~~inhibit tumorigenesis~~.

70. (Original) The method of claim 65, wherein the change in the amount of substrate cleaved is assessed by comparing the amount of substrate cleaved in the presence of the test compound with the amount of substrate cleaved in the absence of the test compound.

71. (Original) The method of claim 67, wherein a plurality of the polypeptides are linked to a solid support, either directly or via a linker.

72. (Original) The method of claim 71, wherein the polypeptides comprise an array.

73. (Withdrawn) A method of identifying a compound that specifically binds to a single-chain and/or two-chain protease domain and/or to single or two-chain full length polypeptide, comprising:

contacting a polypeptide of claim 1 with a test compound or plurality thereof under conditions conducive to binding thereof; and

identifying compounds that specifically bind to the polypeptide single chain protease domain, or two chain form thereof, the full length or two chain form of the full length polypeptide or compounds that inhibit binding of a compound known to bind to the polypeptide single chain protease domain or two chain form thereof or the two chain form of the full length polypeptide, wherein the known compound is contacted with the polypeptide before, simultaneously with or after the test compound.

74. (Withdrawn) The method of claim 73, wherein the polypeptide is linked either directly or indirectly via a linker to a solid support.

75. (Withdrawn) The method of claim 73, wherein the test compounds are small molecules, peptides, peptidomimetics, natural products, antibodies or fragments thereof.

76. (Withdrawn) The method of claim 73, wherein a plurality of the test substances are screened simultaneously.

77. (Withdrawn) The method of claim 73, wherein a plurality of the polypeptides are linked to a solid support.

78. (Withdrawn) A method of identifying a compound that specifically binds to a single-chain and/or two-chain protease domain and/or to single or two-chain full length polypeptide, comprising:

contacting a polypeptide of claim 4 with a test compound or plurality thereof under conditions conducive to binding thereof; and

identifying compounds that specifically bind to the polypeptide single chain protease domain, or two chain form thereof, the full length or two chain form of the full length polypeptide or compounds that inhibit binding of a compound known to bind to the polypeptide single chain protease domain or two chain form thereof or the two chain form of the full length polypeptide, wherein the known compound is contacted with the polypeptide before, simultaneously with or after the test compound.

79. (Withdrawn) A method for identifying activators of the zymogen form of an MTSP7, comprising:

contacting a zymogen form of the polypeptide of claim 1 with a substrate of the activated form of the polypeptide;

adding a test compound, wherein the test compound is added before, after or simultaneously with the addition of the substrate; and

detecting cleavage of the substrate, thereby identifying compounds that activate the zymogen.

80. (Withdrawn) The method of claim 79, wherein the substrate is a chromogenic substrate.

81. (Withdrawn) The method of claim 79, wherein the substrate is a L-pyroglutamyl-L-prolyl-L-arginine-p-nitroaniline hydrochloride.

82. (Withdrawn) The method of claim 79, wherein the test compound is a small molecule, a nucleic acid or a polypeptide.

83. (Cancelled)

84. (Cancelled)

85. (Cancelled)

86. (Cancelled)

87. (Withdrawn) A method of inhibiting tumor initiation, growth or progression or treating a malignant or pre-malignant condition, comprising administering an agent that inhibits activation cleavage of the zymogen form of a polypeptide of claim 1 or an activity of the activated form.

88. (Withdrawn) The method of claim 87, wherein the condition is a condition of the breast, cervix, prostate, lung, ovary or colon.

89. (Withdrawn) The method of claim 87, wherein the agent is an antisense oligonucleotide, double-stranded RNA (dsRNA) or an antibody.

90. (Withdrawn) The method of claim 87, further comprising administering another treatment or agent selected from anti-tumor and anti-angiogenic treatments or agents.

91. (Withdrawn) A method of inhibiting tumor initiation, growth or progression or treating a malignant or pre-malignant condition, comprising administering an agent that inhibits activation cleavage of the zymogen form of a polypeptide of claim 4 or an activity of the activated form.

92. (Withdrawn) The method of claim 91, wherein the condition is a condition of the breast, cervix, prostate, lung, ovary or colon.

93. (Withdrawn) The method of claim 91, wherein the agent is an antisense oligonucleotide, double-stranded RNA (dsRNA) or an antibody.

94. (Withdrawn) The method of claim 91, further comprising administering another treatment or agent selected from anti-tumor and anti-angiogenic treatments or agents.

95. (Withdrawn) A method of identifying a compound that binds to the single-chain and/or two-chain form of a polypeptide of claim 1, comprising:

contacting a test compound with both forms;

determining to which form the compound binds; and

if it binds to a form of polypeptide, further determining whether the compound has at least one of the following properties:

(i) inhibits activation cleavage of the single-chain zymogen form of polypeptide;

(ii) inhibits activity of the two-chain or single-chain form; and

(iii) inhibits dimerization of the polypeptide.

96. (Withdrawn) The method of claim 95, wherein both forms consist essentially of the protease domain produced by cleavage between the arginine and isoleucine in either the single- or two-chain form.

97. (Withdrawn) A method of identifying a compound that binds to the single-chain and/or two-chain form of a polypeptide of claim 4, comprising:

contacting a test compound with both forms;

determining to which form the compound binds; and

if it binds to a form of polypeptide, further determining whether the compound has at least one of the following properties:

(i) inhibits activation cleavage of the single-chain zymogen form of polypeptide;

(ii) inhibits activity of the two-chain or single-chain form; and

(iii) inhibits dimerization of the polypeptide.

98. (Withdrawn) The method of claim 97, wherein both forms consist essentially of the protease domain produced by cleavage between the R and I in either the single- or two-chain form.

99. (Withdrawn) A method of detecting neoplastic disease, comprising: detecting a polypeptide that comprises a polypeptide of claim 1 in a biological sample, wherein the amount detected differs from the amount of polypeptide detected from a subject who does not have neoplastic disease.

100. (Withdrawn) The method of claim 99, wherein the biological sample is selected from the group consisting of blood, urine, saliva, tears, synovial fluid, sweat, interstitial fluid, sperm, cerebrospinal fluid, ascites fluid, tumor tissue biopsy and circulating tumor cells.

101. (Withdrawn) A method of detecting neoplastic disease, comprising: detecting a polypeptide that comprises a polypeptide of claim 4 in a biological sample, wherein the amount detected differs from the amount of polypeptide detected from a subject who does not have neoplastic disease.

102. (Withdrawn) The method of claim 101, wherein the biological sample is selected from the group consisting of blood, urine, saliva, tears, synovial fluid, sweat,

interstitial fluid, sperm, cerebrospinal fluid, ascites fluid, tumor tissue biopsy and circulating tumor cells.

103. (Withdrawn) A method of detecting neoplastic disease, comprising: detecting a polypeptide that comprises a polypeptide of claim 6 in a biological sample, wherein the amount detected differs from the amount of polypeptide detected from a subject who does not have neoplastic disease.

104. (Withdrawn) The method of claim 103, wherein the biological sample is selected from the group consisting of blood, urine, saliva, tears, synovial fluid, sweat, interstitial fluid, sperm, cerebrospinal fluid, ascites fluid, tumor tissue biopsy and circulating tumor cells.

105. (Withdrawn) A method of diagnosing the presence of a pre-malignant lesion, a malignancy, or other pathologic condition in a subject, comprising:

obtaining a biological sample from the subject; and

exposing it to a detectable agent that binds to a two-chain and/or single-chain form of a polypeptide of claim 1, wherein the pathological condition is characterized by the presence or absence of the two-chain or single-chain form.

106. (Withdrawn) A method of diagnosing the presence of a pre-malignant lesion, a malignancy, or other pathologic condition in a subject, comprising:

obtaining a biological sample from the subject; and

exposing it to a detectable agent that binds to a two-chain and/or single-chain form of a polypeptide of claim 4, wherein the pathological condition is characterized by the presence or absence of the two-chain or single-chain form.

107. (Withdrawn) A method of diagnosing the presence of a pre-malignant lesion, a malignancy, or other pathologic condition in a subject, comprising:

obtaining a biological sample from the subject; and

exposing it to a detectable agent that binds to a two-chain and/or single-chain form of a polypeptide of claim 6, wherein the pathological condition is characterized by the presence or absence of the two-chain or single-chain form.

108. (Withdrawn) A method of monitoring tumor progress and/or therapeutic effectiveness, comprising detecting and/or quantifying the level of a polypeptide of claim 1 in a body tissue or fluid sample.

109. (Withdrawn) The method of claim 108, wherein the tumor is a tumor of the breast, cervix, prostate, lung, ovary or colon.

110. (Withdrawn) The method of claim 108, wherein the body fluid is blood, urine, sweat, saliva, cerebrospinal fluid and synovial fluid.

111. (Withdrawn) A method of monitoring tumor progress and/or therapeutic effectiveness, comprising detecting and/or quantifying the level of a polypeptide of claim 4 in a body tissue or fluid sample.

112. (Withdrawn) The method of claim 111, wherein the tumor is a tumor of the breast, cervix, prostate, lung, ovary or colon.

113. (Withdrawn) The method of claim 111, wherein the body fluid is blood, urine, sweat, saliva, cerebrospinal fluid and synovial fluid.

114. (Withdrawn) A method of monitoring tumor progress and/or therapeutic effectiveness, comprising detecting and/or quantifying the level of a polypeptide of claim 6 in a body tissue or fluid sample.

115. (Withdrawn) The method of claim 114, wherein the tumor is a tumor of the breast, cervix, prostate, lung, ovary or colon.

116. (Withdrawn) The method of claim 114, wherein the body fluid is blood, urine, sweat, saliva, cerebrospinal fluid and synovial fluid.

117. – 122. (Cancelled)

123. (New). A polypeptide, comprising the sequence of amino acid residues set forth as residues 206-438 in SEQ ID No. 16 or polypeptide comprising the sequence of amino acid residues set forth as residues 206-438 in SEQ ID No. 16, except that a free cysteine residue in the recited sequence is replaced with a serine residue.

124. (New) A polypeptide of claim 123 that consists of the sequence of amino acid residues set forth as residues 206-438 in SEQ ID No. 16 or a sequence of amino acids in which a free cysteine residue in the recited sequence is replaced with a serine residue.

125. (New) A method for identifying compounds that inhibit the protease activity of a polypeptide, comprising:

contacting a polypeptide of claim 123 with a substrate that is proteolytically cleaved by the polypeptide, and, either simultaneously, before or after, adding a test compound or plurality thereof;

measuring the amount of substrate cleaved in the presence of the test compound; and

selecting test compounds that decrease he amount of substrate cleaved compared to a control, wherein selected test compounds are candidate anti-tumor agents.

125. (New) A conjugate, comprising:

a polypeptide of claim 123; and

a targeting agent linked to the polypeptide directly or via a linker.

126. (New) A method for identifying compounds that inhibit the protease activity of a polypeptide, comprising:

contacting a polypeptide of claim 124 with a substrate that is proteolytically cleaved by the polypeptide, and, either simultaneously, before or after, adding a test compound or plurality thereof;

measuring the amount of substrate cleaved in the presence of the test compound; and

selecting test compounds that decrease the amount of substrate cleaved compared to a control, wherein selected test compounds are candidate anti-tumor agents.

127. (New) A conjugate, comprising:

a polypeptide of claim 124; and

a targeting agent linked to the polypeptide directly or via a linker.